*QUALITY CONTROL REPORTS FOR*

# BITUMINOUS MACADAM

# CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

An ISO 9001:2008 Certified Company

**NABL** - Accredited Laboratory as per ISO / IEC-17025 : 2005

JAS-ANZ BSCIC ISO 9001 REGISTERED


Job No: CTCE/BBMP/WNo.17/SKK/BM(QB)/2014-15 02.05.2014

## TEST REPORT

| | | |
|---|---|---|
| CLIENT | : | **Asst. Executive Engineer,** Yeshwanthapura Sub Division, BBMP, Bangalore. |
| AGENCY | : | **Mr. Shivakumar K,** Contractor, Bangalore. |
| NAME OF THE WORK | : | Providing and laying HDPE Water line In Mutyala Nagar Block-4 in J.P Park, Ward No. 17, BBMP, Bangalore. |
| REFERENCE | : | EE/RRND/Wo. No./232/2013-14 Dated: 07.02.2014 |
| SAMPLE ID | : | Bitumen |
| DATE OF TESTING | | 02.05.2014 |

The results of the tests conducted on the bitumen sample using for Bituminous Macadam

| Sl. No | Description | Test Method as per IS | Test Result | Requirement as per IS:73:2013 |
|---|---|---|---|---|
| 1 | Penetration at 25 $^0$C, 1/10 mm | IS :1203 -1978 (RA-2009) | 67 | 60 to 70 |
| 2 | Softening point, $^0$C | IS :1205 -1978 (RA-2009) | 50 | Min. 45 |
| 3 | Ductility at 27$^0$C, cm | IS :1208 -1978 (RA-2009) | 100 > | Min. 50 |
| 4 | Flash Point, $^0$C | IS :1209 -1978 (RA-2009) | 296 | Min. 220 |

Note:

⇒ This test report shall not be reproduced except in full, without written approval of the laboratory.

⇒ The results indicated above are based on the tests carried out on the samples collected from the plant.

⇒ Any Query regarding the report must be reported within 30 days from the date of testing.

M/s. Civil-Tech Consultants & Engineers
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## Aggregate Impact Value

IS: 2386 Part IV

| | |
|---|---|
| Client | **Asst. Executive Engineer,** Yeshwanthapura Sub Division, BBMP, Bangalore. |
| Agency | **Mr. Shivakumar K,** Contractor, Bangalore. |
| Name of the Work | Providing and laying HDPE Water line In Mutyala Nagar Block-4 in J.P Park, Ward No. 17, BBMP, Bangalore. |
| Reference | EE/RRND/Wo. No./232/2013-14 Dated: 07.02.2014 |
| Source / Location | Hotmix Plant |
| Type of Mix | Bituminous Macadam |
| Date of Testing | 02.05.2014 |

| Sl No. | Details | Trial No. 1 | Trial No. 2 | Average |
|---|---|---|---|---|
| 1 | Total weight of aggregate sample filling the cylindrical measure = $W_1$ g | 378 | 383 | |
| 2 | Weight of agregate passing 2.36 mm sieve after the test = $W_2$ g | 81 | 84 | |
| 3 | Weight of aggregate retained 2.36 mm sieve after the test = $W_3$ g | 298 | 299 | |
| 4 | Aggregate Impact value = percent fines | 21.43 | 21.93 | |
| | 100* ($W_2$/$W_1$)% | | | 21.68 |

Comments:

→ Maximum allowable Aggregate Impact value for Bituminous Macadam is 30%

Note:

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| Source / Location | Hotmix Plant |
| Type of Mix | Bituminous Macadam |
| Date of Testing | 02.05.2014 |

| Sl No. | Details | Trial No. 1 | Trial No. 2 | Average |
|---|---|---|---|---|
| 1 | Total weight of aggregate sample filling the cylindrical measure = $W_1$ g | 383 | 384 | |
| 2 | Weight of agregate passing 2.36 mm sieve after the test = $W_2$ g | 84 | 85 | |
| 3 | Weight of aggregate retained 2.36 mm sieve after the test = $W_3$ g | 298 | 296 | |
| 4 | Aggregate Impact value = percent fines | 21.93 | 22.14 | |
| | 100* ($W_2/W_1$)% | | | 22.03 |

Comments:

→ Maximum allowable Aggregate Impact value for Bituminous Macadam is 30%

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